

REVIEW DRAFT vD3

Technology Solutions Delivery Management

Overview: The EPIC Method Version 01.02

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Table of Contents

<i>Executive Summary</i>	4
1 PROCESS FRAMEWORK	5
SOLUTIONS PRACTICE MANAGEMENT (OVERVIEW)	5
ENGAGEMENT MANAGEMENT.....	6
1. <i>Management Processes</i>	6
2. <i>Management Functions</i>	7
3. <i>Delivery Stages</i>	7
2 MANAGEMENT FUNCTIONS	8
2.1 <i>Project Management Function</i>	9
2.2 <i>Solutions Management Function</i>	9
2.3 <i>Deployment Management Function</i>	9
3 MANAGEMENT PROCESSES	10
3.1 <i>Scope Management</i>	11
3.2 <i>Quality Management</i>	12
3.3 <i>Risk & Issues Management</i>	13
3.4 <i>Procurement Management</i>	14
3.5 <i>Knowledge & Communications Management</i>	15
3.6 <i>Project Integration Management</i>	16
3.7 <i>Cost Management</i>	17
3.8 <i>Task & Activity Management</i>	18
3.9 <i>Human Resource Management</i>	19
3.10 <i>Technical Requirements & Analysis Management</i>	21
3.11 <i>Technical Standards & Solution Design Management</i>	21
3.12 <i>Technical Solutions Development Management</i>	22
3.13 <i>Technical Solutions Deployment Management</i>	23
4 PROCESS DELIVERY STAGES	24
4.1 <i>Stage-1: Engagement Initiation</i>	25
4.2 <i>Stage-2: Planning</i>	25
4.3 <i>Stage-3: Implementation</i>	26
4.4 <i>Stage-4: Closure & Transition</i>	27
5 PROCESS INTEGRATION	28
5.1 <i>Integration Grid</i>	29



Table of Figures

FIGURE 1: SOLUTIONS PRACTICE MANAGEMENT	5
FIGURE 2: PROCESS FRAMEWORK	6
FIGURE 3: MANAGEMENT FUNCTIONS.....	8
FIGURE 4: MANAGEMENT PROCESSES	10
FIGURE 5: PROCESS DELIVERY STAGES	24
FIGURE 6: PROCESS INTEGRATION	28

Executive Summary

Overview

The “EPIC Method,” is a proprietary project management (solutions delivery) methodology developed by CT Bergman. It serves as the foundation for developing ongoing strategic partnerships with clients who can benefit from a shared process utilizing simple but effective tools and methods to enhance individual and team performance.

Within the EPIC Method's shared framework, information technology is delivered in an efficient, consistent manner that satisfies the pressing need for rapid solutions development. By executing the EPIC Method, both client and third-party consulting organizations will be able to effectively manage and control project costs, leverage dedicated and shared resources, improve overall project performance by managing stakeholder expectations and reducing redundancies across diverse disciplines.

The EPIC Method deploys proven project management principles to develop and deliver technology solutions. What sets it apart is that its “Solutions Development Life Cycle” (SDLC) integrates project and systems development life cycle methods, resulting in a simpler, synergistic process that facilitates the flow of work and eliminates redundant work efforts.

This document provides a rationale and overview of engagement management from a technology solutions practice perspective. An overview of (solutions) practice management is included (Section 1) to provide the context of engagement management as it relates to other areas of practice management.

Background

If you study the technology project management (PM) methodologies of the top global consulting organizations, you'll note that they share a common problem: their scope is very narrow, and limited to an abridged version of the classic System Development Life-Cycle (SDLC) used in software engineering. These methods claim to provide users with a "comprehensive" approach to managing IS/IT¹ projects across an enterprise. Unfortunately, such highly structured methods miss the boat when it comes to scalability or adaptability, particularly for physical systems development projects like data center or infrastructure connectivity. For these projects, consulting organizations seem to use ad-hoc or integrated methods that more closely resemble Project Management Institute's (PMI) Project Body of Knowledge (PMBOK). The PMBOK was never intended to serve as a methodology, but rather, as a guideline or basis for methodologies. It is far too generic to be implemented "as is," and does not include the application management functions required for information systems and technology projects.

The EPIC Method applies the disciplined approach of project management to the development and delivery of diverse technology products. It fills the business community's need to reorganize its utilization and management of technology and create a more scalable technology infrastructure that is adaptive and scalable to rapidly changing business needs and priorities.

EPIC provides a foundation for IS/IT project management that can easily accommodate IS/IT projects of any type or size. Integrative PM functions are combined with fundamental technology concepts and functions, resulting in a synergistic approach to project management.

The EPIC Method Overview is intended solely to provide a conceptual understanding of the method and establish a design matrix. The next step is to develop the detail, reference tools and related material, including integrated tools and procedures (currently a WIP²) that will offer significant time-saving advantages to project team members, and serve as input to a knowledge base repository for continuous process improvement.

¹ Refers to Information Systems and Information Technology

² Work in Process

1 Process Framework

Solutions Practice Management (Overview)

Practice management, as it relates to technology consulting, typically focuses on a specific area of technical knowledge or product line and involves three areas of operations {marketing & sales, project management, and technical (human) resource management}. The EPIC Method takes a grass-roots approach at identifying operational processes by establishing three general practice areas, each with its own unique skill sets. These practice areas combine to form an overall *Solutions Practice Management* Methodology. The EPIC Method is a framework for delivering technology solutions that meet business needs.

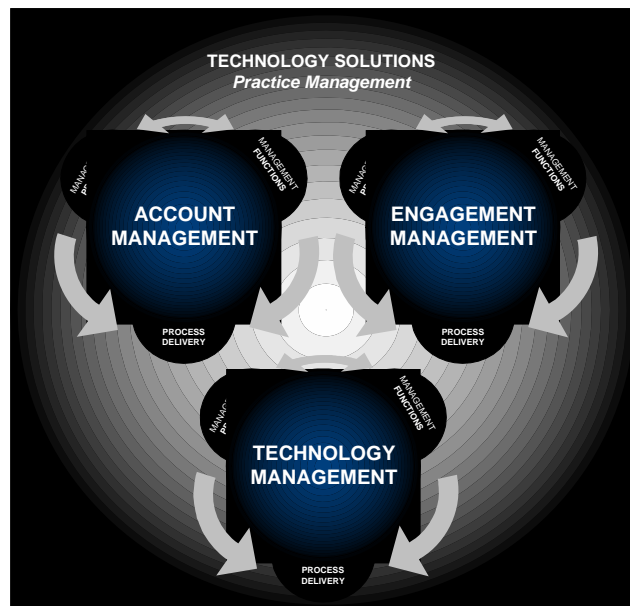


Figure 1: Solutions Practice Management Process Framework

- **Account Management (sales & marketing)**
 - Focuses on the overall Client relationship
 - Manages (Client) strategic relationships & product/service needs
 - Develops Client expectations and strategic partnerships
 - Assures long-term account stability
- **Engagement Management (project management)**
 - Focuses on Client delivery
 - Manages Client expectations & product/service delivery
 - Develops (Client) tactical relationships
 - Assures Client satisfaction
- **Technology Management (technical resource management and R&D)**
 - Focuses on technical architecture and process improvement
 - Manages new technologies, products and services
 - Develops innovative solutions to client needs
 - Assures appropriate solution to business needs

Engagement Management

The EPIC Method structures engagement management into three (3) distinct process areas (*Figure 1*). The seamless integration of these process areas comprises the EPIC Method's *Solutions Development Life-Cycle*.

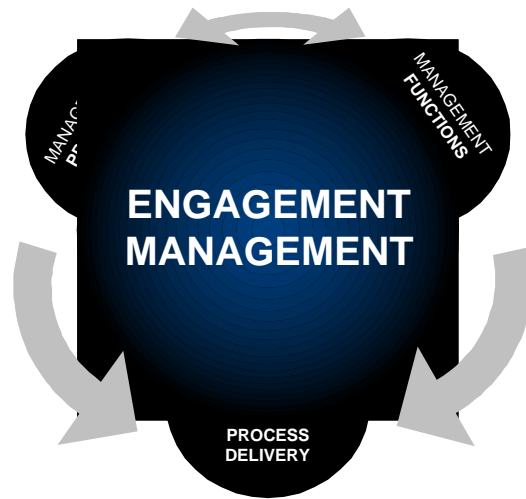


Figure 2: Engagement Management Process Framework

1. Management Processes

The Management Processes define thirteen (13) discrete disciplines that comprise the EPIC method.

- 1.1. *Project Scope Management*
- 1.2. *Project Quality Management*
- 1.3. *Project Risk & Issues Management*
- 1.4. *Project Procurement Management*
- 1.5. *Knowledge/Communications Management*
- 1.6. *Project Integration Management*
- 1.7. *Project Cost Management*
- 1.8. *Project Activity Management*
- 1.9. *Project (Human) Resource Management*
- 1.10. *Technical Requirements & Analysis Management*
- 1.11. *Technical Standards & Design Management*
- 1.12. *Technical Solutions Development & Build Management*
- 1.13. *Technical Solutions Deployment Management*

These processes are applied by project team members whose roles are defined in one or more Management Functions.

2. Management Functions

Management Functions define the major areas of responsibility (a.k.a. project “tracks”), along with the objectives, activities and deliverables that aggregate the successful completion of the project.

Project roles and responsibilities comprise one or more of the following functions:

- *Project Management*
- *Solutions Management*
- *Deployment Management*

3. Delivery Stages

Delivery Stages define a common, sequential ‘step’ method for organizing work activities and deliverables. The Solutions Development Life Cycle method comprises four process (delivery) stages:

- *Engagement Initiation*
- *Planning*
- *Implementation & Control*
- *Closure/Transition*

2 Management Functions

Management Functions provide the vehicles by which processes are utilized and executed. Each Management Function consists of Roles, Activities, Procedures, and Deliverables, and are lead by a Function Team Leader. Activities and deliverables are identified in the applicable Management Functions and further defined in the Staged Delivery steps outlined under each function. Combined, these Management Functions form the Project Team. The Project Team is managed by an Engagement Manager, who is ultimately responsible for the successful delivery of promised work products, and meeting or exceeding client expectations.

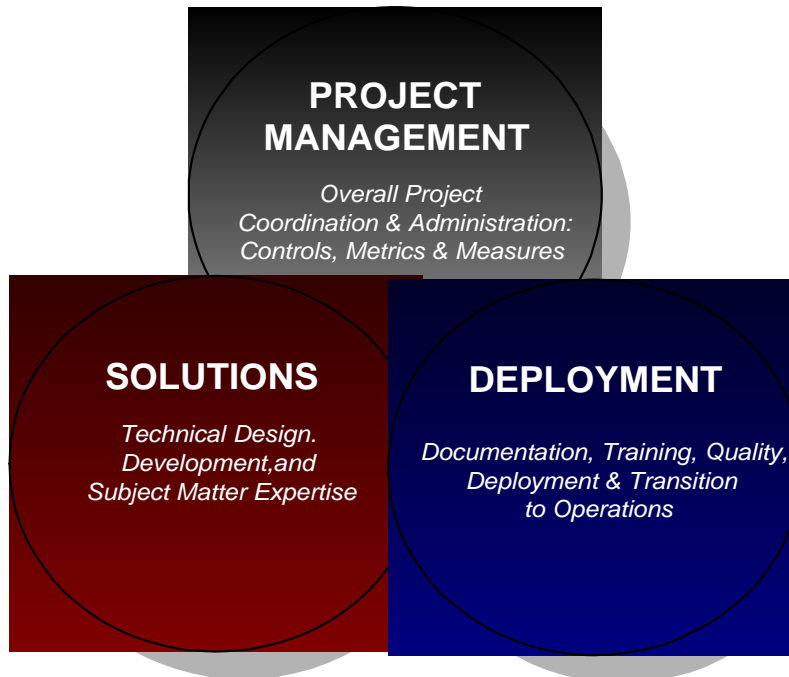


Figure 3: Management Functions

2.1 Project Management Function

The Project Management Function provides ongoing support to other management functions and is responsible for facilitating and coordinating all project activities, events and deliverables. This Function administers and monitors project management controls throughout the duration of the project.

Roles

- *Project Team Leader/Project Manager*
- *Project Administrator*
- *Administrative Support Coordinator*
- *Business Analyst*
- *Subject Matter Expert*

2.2 Solutions Management Function

This function is responsible for the design & development of the project's product (IS/IT solution). In addition to providing technical solutions, this function provides technical subject matter expertise to support other management functions.

Roles

- *Solutions Team Leader/Technical Architect*
- *Technical Analyst*
- *Developer*
- *Programmer*
- *Technician*
- *Product Expert*

2.3 Deployment Management Function

This function is responsible for leading user and delivery related activities, including internal and external communications, user training and documentation, and product pre-deployment quality assurance.

Roles

- *Deployment Team Leader/Logistician*
- *Technical Writer*
- *Training Coordinator*
- *Quality Assurance Coordinator*
- *Customer Service/Help-Desk Analyst*
- *Technical Support Specialist*

3 Management Processes

Management Processes are predefined methods that standardize the processes, activities, procedures and deliverables required for the successful completion of a project.

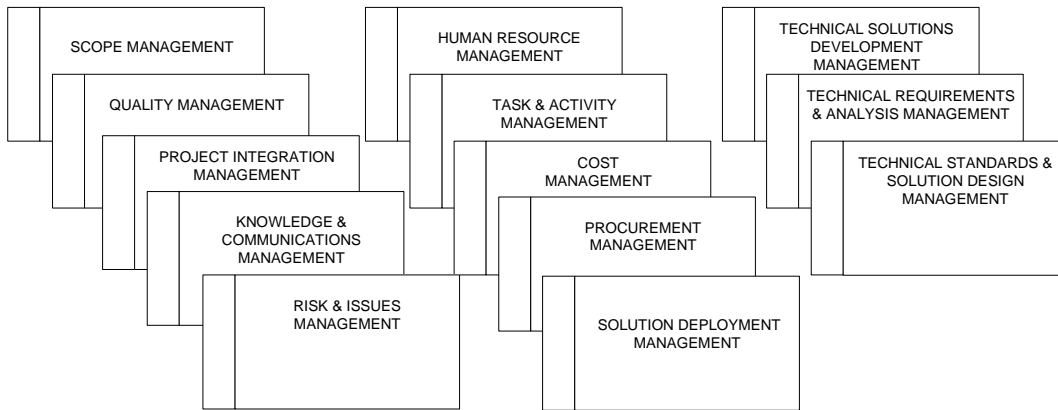


Figure 4: Management Processes

3.1 Scope Management

Scope Management defines the parameters within which all processes, activities, procedures and deliverables are measured to specify successful project completion. Its purpose is to ensure that the work performed is consistent with that which was originally agreed to by the project's major stakeholders, as stipulated in the project planning documentation. Effective Scope Management includes establishing, aligning and controlling client expectations as they relate to the project work plan, implementation and delivery of activities and work products. Project Scope Management includes Pre-Project³ documentation⁴, scope planning and definition, scope verification and scope change control.

Major Components:

- Scope Planning & Definition
- Scope Verification
- Scope Change Control

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<ul style="list-style-type: none"> <input type="checkbox"/> Client organization's corporate vision and mission statements <input type="checkbox"/> Client's Strategic Plan (IS/IT and Business) <input type="checkbox"/> Client history & organizational policies <input type="checkbox"/> Known Project Constraints & Assumptions 	<ul style="list-style-type: none"> <input type="checkbox"/> PMIS⁵ Data Reviews <input type="checkbox"/> Stakeholder interviews <input type="checkbox"/> Review of formal policies & procedures <input type="checkbox"/> Business Requirements Analysis & Assessment <input type="checkbox"/> Stakeholder Presentation (Findings & Approach) 	<ul style="list-style-type: none"> <input type="checkbox"/> Formalization and validation of Business Requirements <input type="checkbox"/> Scope Statement <input type="checkbox"/> Scope Management Plan <input type="checkbox"/> Initial Project Constraints <input type="checkbox"/> Initial Project Assumptions <input type="checkbox"/> Project Work Breakdown Structure

³ The "Pre-Project" stage is a relative term that indicates project-related processes, activities, procedures and documentation that lead up to the initiation of a project. This stage is often referred to as a "Preliminary" or "Feasibility" stage.

⁴ Includes business requirements as defined in a Request for Proposal, Feasibility Study, Solutions Approach or Strategy, Project Proposal, etc.

⁵ Project Management Information Systems

3.2 Quality Management

Quality Management encompasses all aspects of quality control assurance and improvement, across all management processes, functions and delivery stages. Its purpose is to establish a reliable means of identifying, monitoring and ensuring compliance to the standards that have been defined for all management disciplines related to the project.

Major Components:

- Quality Standards Identification & Planning
- Quality Control Systems Design & Execution
- Quality Assurance (Review, Monitoring, & Compliance)

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<input type="checkbox"/> Formal Business Requirements Document <input type="checkbox"/> Project Charter <input type="checkbox"/> Scope Statement <input type="checkbox"/> Scope Management Plan <input type="checkbox"/> Constraints <input type="checkbox"/> Assumptions <input type="checkbox"/> Quality Policy <input type="checkbox"/> Related Standards and Regulations	<input type="checkbox"/> Cost/Benefit Analysis <input type="checkbox"/> Trend Analysis <input type="checkbox"/> Benchmarking Best Practices <input type="checkbox"/> Process Flowcharting <input type="checkbox"/> Design of Experiments/ Test Case Scenarios <input type="checkbox"/> Quality Reviews & Audits <input type="checkbox"/> Pareto Diagramming <input type="checkbox"/> Statistical Sampling	<input type="checkbox"/> Quality Management Plan <input type="checkbox"/> Operational Definitions <input type="checkbox"/> Quality Checklists <input type="checkbox"/> Work Product Acceptance & Rework <input type="checkbox"/> Process Improvement

3.3 Risk & Issues Management

Project Risk & Issues Management is the means by which project risk is effectively qualified, quantified, evaluated and controlled throughout the project's life cycle. The purpose of *Risk Management* is to identify potential and actual risks, assess their impact on the project's success and determine the course of action to ignore, mitigate or eliminate those risks. The purpose of *Issues Management* is to identify, control, and bring to closure exigencies that could otherwise jeopardize the timely delivery of milestone-level work products.

Key Components:

- Risk Identification (Qualification & Quantification)
- Risk Response Development (Contingencies, Mitigation & Tolerances)
- Risk Response Control Design & Execution
- Issues Identification, Planning & Management

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<ul style="list-style-type: none"> ❑ Formal Business Requirements Document ❑ Project Charter ❑ Scope Statement ❑ Constraints ❑ Assumptions ❑ Quality Policy ❑ Related Standards and Regulations ❑ Quality Management Plan ❑ Operational Definitions ❑ Formal Contingency Plans ❑ Contracts & Insurance Policies ❑ Budget Reserves 	<ul style="list-style-type: none"> ❑ Interviewing ❑ Cause & Effect Analysis ❑ Risk Assessment and Valuation ❑ Simulation ❑ Decision Tree Diagramming ❑ Contingency Planning ❑ Alternative Strategies ❑ Subject Matter Expert Reviews ❑ Insurance & Budget Reserve Planning 	<ul style="list-style-type: none"> ❑ Identification of Risk Sources & Events ❑ Risk Triggers & Alerts ❑ Risk Management Plan ❑ Risk Mitigation ❑ Issues Identification & Management Plan ❑ Formal Contingency Plans ❑ Contracts & Insurance Policies ❑ Budget Reserves

3.4 Procurement Management

Project Procurement Management addresses the requisition and acquisition of goods and services from outside vendors. Its purpose is to efficiently control sourcing, negotiating and procurement requirements, and to manage vendor contracts and agreements through to closure.

Major Components:

- Procurement Planning
- Vendor/Contract Management
- Contract Administration

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<input type="checkbox"/> Formal Business Requirements Document <input type="checkbox"/> Project Charter <input type="checkbox"/> Scope Statement <input type="checkbox"/> Constraints <input type="checkbox"/> Assumptions <input type="checkbox"/> Quality Policy <input type="checkbox"/> Related Standards and Regulations <input type="checkbox"/> Quality Management Plan <input type="checkbox"/> Operational Definitions <input type="checkbox"/> Quality Checklists <input type="checkbox"/> Formal Contingency Plans <input type="checkbox"/> Contracts & Insurance Policies <input type="checkbox"/> Budget Reserves Risk Management Plan <input type="checkbox"/> Administrative Policies & Procedures <input type="checkbox"/> Procurement Resources <input type="checkbox"/> Market Conditions	<input type="checkbox"/> Interviewing <input type="checkbox"/> Cause & Effect Analysis <input type="checkbox"/> Risk Assessment and Valuation <input type="checkbox"/> Simulation <input type="checkbox"/> Decision Tree Diagramming <input type="checkbox"/> Subject Matter Expert Reviews <input type="checkbox"/> Build/Outsource Analysis <input type="checkbox"/> Contract Criteria Analysis & Determination <input type="checkbox"/> Contract Negotiation <input type="checkbox"/> Independent Estimates <input type="checkbox"/> Bidders Conferences <input type="checkbox"/> Contractor Screening Process Determination	<input type="checkbox"/> Procurement Management Plan <input type="checkbox"/> Sub-contractor Statements of Work <input type="checkbox"/> Contractor Management Process <input type="checkbox"/> Procurement Control Documentation <input type="checkbox"/> Vendor/Contractor Performance Criteria <input type="checkbox"/> Vendor Contracts <input type="checkbox"/> Accounting & Communications System <input type="checkbox"/> Requests For Proposals <input type="checkbox"/> Project-Specific Management Policies & Procedures <input type="checkbox"/> Project Templates & Forms

3.5 Knowledge & Communications Management

Knowledge & Communications Management controls all processes involving internal and/or external information. *Knowledge Management* addresses the acquisition, distribution, and ultimate disposition of specific project information. Its purpose is to filter, manage and control project information, maximizing its value to stakeholders. *Communications Management* addresses the timely and appropriate generation, collection, distribution, dissemination and storage of project information. Its purpose is to improve the synergy among stakeholders by creating a reciprocal understanding of goals and expectations.

Major Components:

- Internal Communications & Team Planning
- External Communications & Promotion Management
- Information Management (Documentation & Distribution)
- Performance & Status Reporting

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<input type="checkbox"/> Formal Business Requirements Document <input type="checkbox"/> Project Charter <input type="checkbox"/> Scope Statement <input type="checkbox"/> Project Constraints <input type="checkbox"/> Project Assumptions <input type="checkbox"/> Quality Policy <input type="checkbox"/> Related Standards and Regulations <input type="checkbox"/> Quality Management Plan <input type="checkbox"/> Operational Definitions <input type="checkbox"/> Formal Contingency Plans <input type="checkbox"/> Contracts & Insurance Policies <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Administrative Policies & Procedures <input type="checkbox"/> Procurement Management Plan <input type="checkbox"/> Statements of Work <input type="checkbox"/> Accounting & Communications Systems <input type="checkbox"/> Vendor/Contractor Performance Criteria <input type="checkbox"/> Vendor Contracts <input type="checkbox"/> Requests For Proposals <input type="checkbox"/> Project-Specific Management Policies & Procedures <input type="checkbox"/> Project Templates & Forms	<input type="checkbox"/> Team-Building Activities <input type="checkbox"/> Recognition & Reward Program <input type="checkbox"/> Collocation <input type="checkbox"/> JAD/RAD ⁶ & Strategic Planning Sessions <input type="checkbox"/> Information/Communications Policy Review & Adaptation <input type="checkbox"/> Post-Project Performance Gap Analysis	<input type="checkbox"/> Communications Management Requirements <input type="checkbox"/> Communications Management Plan <input type="checkbox"/> Internal Information Management & Reporting Guidelines & Procedures <input type="checkbox"/> Project Binder <input type="checkbox"/> Project Kick-Off & Team Meetings <input type="checkbox"/> Post-Project Review, Performance Report

⁶ Joint Applications Development/Rapid Analysis Development

3.6 Project Integration Management

Project Integration Management is the means by which project plan management, control, and overall project change management are addressed and coordinated. Its purpose is to achieve project objectives more efficiently by combining activities, tasks and deliverables from all three Management Functions. This ensures that project stakeholder expectations are met or exceeded.

Major Components:

- Project Plan Development
- Project Plan Execution
- Project (Overall) Change Control

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<input type="checkbox"/> Scope Management Plan <input type="checkbox"/> Constraints <input type="checkbox"/> Assumptions <input type="checkbox"/> Quality Management Plan <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Administrative Policies & Procedures <input type="checkbox"/> Procurement Management Plan <input type="checkbox"/> Performance Reports <input type="checkbox"/> Communications Management Plan <input type="checkbox"/> Internal Information Management & Reporting Guidelines & Procedures <input type="checkbox"/> Project Team Meeting Minutes/Notes <input type="checkbox"/> Change Requests <input type="checkbox"/> Project Roles & Responsibilities <input type="checkbox"/> Project-Specific Management Policies & Procedures <input type="checkbox"/> Project Templates & Forms	<input type="checkbox"/> PMIS Tools & Methods <input type="checkbox"/> Project Management Methodologies <input type="checkbox"/> Monte Carlo Method of Estimation <input type="checkbox"/> Stakeholder Meetings	<input type="checkbox"/> Project Charter & Authorization <input type="checkbox"/> Project Approach Strategy <input type="checkbox"/> Tactical Approach & Support Documentation <input type="checkbox"/> Project Vision & Mission Statements <input type="checkbox"/> Project Constraints <input type="checkbox"/> Project Assumptions <input type="checkbox"/> Project Management Plan <input type="checkbox"/> High-Level Project Plans <input type="checkbox"/> Aggregate Project Plan <input type="checkbox"/> Project Plan Changes <input type="checkbox"/> Project-Specific Policies & Procedures

3.7 Cost Management

Definition, Purpose & Scope:

Cost Management is the means by which all aspects of project cost are addressed. Its purpose is to identify and control project costs, ensure fiscal accountability, and maintain accurate financial records.

Major Components:

- Resource (Roles, Equipment, Facilities, Material) Planning
- Cost Estimating & Budgeting
- Cost Management Planning
- Cost Control (Monitoring & Execution)

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<input type="checkbox"/> Work Breakdown Structure <input type="checkbox"/> Scope Management Plan <input type="checkbox"/> Project Roles & Responsibilities <input type="checkbox"/> Organizational Administrative/Financial Policies <input type="checkbox"/> Resource Costs & Cost Criteria <input type="checkbox"/> Procurement Management Plan <input type="checkbox"/> Chart of Accounts <input type="checkbox"/> Performance Reports <input type="checkbox"/> Activity Duration Estimates <input type="checkbox"/> Change Requests <input type="checkbox"/> Project-Specific Management Policies & Procedures <input type="checkbox"/> Project Templates & Forms	<input type="checkbox"/> Analogous Estimating <input type="checkbox"/> Parametric Modeling & Estimating <input type="checkbox"/> Bottom-Up Estimating <input type="checkbox"/> Cost Estimation & Management Tools (Software) and Techniques <input type="checkbox"/> Cost Change Control System <input type="checkbox"/> Performance Metrics & Measurement <input type="checkbox"/>	<input type="checkbox"/> Resource Cost Requirements <input type="checkbox"/> Cost Estimates & Revisions <input type="checkbox"/> Cost Management Plan <input type="checkbox"/> Cost Baseline <input type="checkbox"/> Project Budget Proposals & Updates <input type="checkbox"/> Budget Variance Reporting <input type="checkbox"/> Approved Budget & Cost Baseline <input type="checkbox"/> Post-Project Cost Analysis Report

3.8 Task & Activity Management

Task & Activity Management (a.k.a. Time Management) identifies, defines, prioritizes and manages all aspects of work activities within a project environment. Its purpose is to ensure the timely completion of the project and its deliverables; it achieves this by establishing the criteria for and managing the execution and delivery of project work products required for the successful completion of the project.

Major Components:

- Task/Activity Definition & Sequencing
- Task/Activity Duration Estimating
- Schedule Development
- Schedule Control (Monitoring & Execution)

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<input type="checkbox"/> Work Breakdown Structure <input type="checkbox"/> Project Activity List <input type="checkbox"/> Scope Management Plan <input type="checkbox"/> Project Charter <input type="checkbox"/> Performance Reports <input type="checkbox"/> Change Requests <input type="checkbox"/> Constraints <input type="checkbox"/> Assumptions <input type="checkbox"/> Resource Requirements <input type="checkbox"/> Roles & Responsibilities <input type="checkbox"/> Project-Specific Management Policies & Procedures <input type="checkbox"/> Project Templates & Forms	<input type="checkbox"/> Identification, Validation & Classification of Dependencies <input type="checkbox"/> Activity Decomposition <input type="checkbox"/> Diagramming Methods (PDM ⁷ , ADM ⁸ , CPM, PERT ⁹ , GERT ¹⁰ , etc.) <input type="checkbox"/> PMIS and Scheduling Software Applications <input type="checkbox"/> Project Management Software Applications <input type="checkbox"/> Change Control Systems <input type="checkbox"/> Mathematical Analysis <input type="checkbox"/> Duration Compression <input type="checkbox"/> Resource Leveling Heuristics <input type="checkbox"/> Monte Carlo Analysis	<input type="checkbox"/> Project Activity List & Updates <input type="checkbox"/> Work Breakdown Structure Updates <input type="checkbox"/> Project Network Diagram <input type="checkbox"/> Activity Duration Estimates <input type="checkbox"/> Basis of Estimates <input type="checkbox"/> Project Schedule & Supporting Detail <input type="checkbox"/> Schedule Management Plan <input type="checkbox"/> Schedule Contingency Planning

⁷ Precedence Diagramming Method
⁸ Arrow Diagramming Method
⁹ Program Evaluation Review Technique
¹⁰ Graphical Evaluation Review Technique

3.9 Human Resource Management

Human Resource Management addresses those processes that involve staffing, organizational development and administration of human resources. Its purpose is to optimize the efficient use and leveragability of human resources by identifying roles, outlining and developing interrelationships, and defining project organizational structures.

Major Components:

- Organizational Planning & Development
- Human Resource Acquisition & Placement
- Human Resource & Team Development

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<input type="checkbox"/> Resource Requirements <input type="checkbox"/> HR Policies, Procedures and Recruiting Practices <input type="checkbox"/> Communications Management Plan <input type="checkbox"/> Procurement Management Plan <input type="checkbox"/> Cost Management Plan <input type="checkbox"/> Quality Management Plan <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Resource Pool & Description <input type="checkbox"/> Project-Specific Management Policies & Procedures <input type="checkbox"/> Project Templates & Forms <input type="checkbox"/> Project Plans <input type="checkbox"/> Constraints <input type="checkbox"/> Assumptions	<input type="checkbox"/> Project Kick-Off Meeting <input type="checkbox"/> Staff Pre-Assignment <input type="checkbox"/> Team Building Exercises <input type="checkbox"/> Project Team Training <input type="checkbox"/> Recognition & Reward Program <input type="checkbox"/> Collocation <input type="checkbox"/> Role Analysis & Staff Assignment	<input type="checkbox"/> Project Roles & Responsibilities <input type="checkbox"/> Project Role Assignment <input type="checkbox"/> Project Staffing Management Plan <input type="checkbox"/> Project Organization Chart & Team Directory <input type="checkbox"/>

NOTE

The inputs, tools and techniques related to the deliverables associated with the ensuing technical management processes (1.10 to 1-13 inclusive) are largely dependent on the type of solution product required. The key deliverables listed under each of these processes are required regardless of the type of project or product solution.

3.10 Technical Requirements & Analysis Management

Technical Requirements & Analysis Management identifies, defines and documents the functional and technical requirements that form the basis of the project's technical deliverables and product solutions. Its purpose is to translate business needs and requirements into the technical design requirements that will determine product solution functionality. A series of fact-finding, discovery related activities, validation of found information and technical assessment of the data provides the basis for the project's solution architectural design.

Major Components:

- Functional & Technical Requirements Management
- Technical Review & Analysis

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<ul style="list-style-type: none"> <input type="checkbox"/> Organizational Charts/Roles & Responsibilities <input type="checkbox"/> Project Stakeholders & Key Contact Roster <input type="checkbox"/> Group & Individual (Key Stakeholder) Interviews <input type="checkbox"/> Existing Workflow Diagrams <input type="checkbox"/> Current Network Diagrams <input type="checkbox"/> Facility Blueprints <input type="checkbox"/> Asset Inventory Report <input type="checkbox"/> IT/IS Strategic Plan/Vision 	<ul style="list-style-type: none"> <input type="checkbox"/> Spreadsheet Data Charting <input type="checkbox"/> Data/Object Modeling <input type="checkbox"/> Presentation Tools <input type="checkbox"/> Interview Questionnaires <input type="checkbox"/> Asset Inventory Analysis 	<ul style="list-style-type: none"> <input type="checkbox"/> Functional/Technical Design Requirements <input type="checkbox"/> Current Position Statement <input type="checkbox"/> Current-State Diagram <input type="checkbox"/> Gap Analysis Findings Report <input type="checkbox"/> Client/Sponsor Presentation of Findings <input type="checkbox"/> Client/Sponsor and Key Stakeholder Validation of Requirements

3.11 Technical Standards & Solution Design Management

Technical Standards & Solution Design Management dictates the technical standards, architecture and design of the project's product solution. Its purpose is to establish, and implement technical specifications and technology standards to be implemented by the Solutions Development Function.

Major Components:

- Conceptual Design & Prototype Management (POC)
- Product Technical Design Standards
- Product Security Standards
- Product Quality & Testing Standards

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<ul style="list-style-type: none"> <input type="checkbox"/> Functional/Technical Design Requirements <input type="checkbox"/> Current Position Statement <input type="checkbox"/> Current-State Diagram <input type="checkbox"/> Gap Analysis Findings Report <input type="checkbox"/> Quality Control/Management Plan <input type="checkbox"/> Qualitative/Quantitative IT/IS Metrics & Standards <input type="checkbox"/> Risk Management/Control Plan 	<ul style="list-style-type: none"> <input type="checkbox"/> Test Scripts/Matrices <input type="checkbox"/> Technology Assessment <input type="checkbox"/> JAD/RAD Review <input type="checkbox"/> Presentation Tools <input type="checkbox"/> Interview Questionnaires <input type="checkbox"/> Development Process/Methodology <input type="checkbox"/> 	<ul style="list-style-type: none"> <input type="checkbox"/> Architecture/Design Strategy & Approach <input type="checkbox"/> Solution Development & Test Environment Criteria <input type="checkbox"/> Conceptual Solution Design <input type="checkbox"/> Proof of Concept <input type="checkbox"/> Build & Test Prototype <input type="checkbox"/> Determination and Documentation of Technical Standards <input type="checkbox"/> Initial Technical/Technology Resource Requirements <input type="checkbox"/> End-State Diagram <input type="checkbox"/> High-Level Technical Solution Specifications & Determination of Solution Development (SD) Methodology <input type="checkbox"/> Step-Chart Illustration of SD Methodology

3.12 Technical Solutions Development Management

Technical Solutions Development Management is the process of reviewing the design and constructing the product solution. The purpose of this management process is to establish technical specifications and technology standards to be implemented by the Solutions Development Function.

Major Components:

- Product Design & Development
- Product Testing
- Construct (Build) Management

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<ul style="list-style-type: none"> <input type="checkbox"/> Step-Chart Illustration of SD Methodology Architecture/Design Strategy & Approach <input type="checkbox"/> Approved Conceptual Solution Design <input type="checkbox"/> Proof of Concept/ Completion & Acceptance of Prototype <input type="checkbox"/> Approved Technical Standards <input type="checkbox"/> Approved High-Level Technical Solution Specifications <input type="checkbox"/> Initial Technical/Technology Resource Staffing 	<ul style="list-style-type: none"> <input type="checkbox"/> UML/Unified Process, SEI/PMM & method (or other iterative development method) 	<ul style="list-style-type: none"> <input type="checkbox"/> Completion of Development & Test Environments <input type="checkbox"/> Detailed Technical/Technology Resource Requirements <input type="checkbox"/> Detailed Technical Solution Specifications <input type="checkbox"/> Solution Construct(s) to Specifications <input type="checkbox"/> Solution Construct Test Reports <input type="checkbox"/> Technical Configuration Management Plan

3.13 Technical Solutions Deployment Management

Technical Solutions Deployment Management develops user and production support and materials, qualitative and quantitative analysis of technology transition, and the physical distribution/rollout of the product solution to its intended user communities and/or production environment(s).

Major Components:

- Deployment Logistics Management
- Pilot Deployment & Analysis
- Product Deployment & Post Deployment Analysis
- Product Technical & User Training & Documentation

Key Deliverables:

<i>Inputs</i>	<i>Tools & Techniques</i>	<i>Deliverables</i>
<ul style="list-style-type: none"> <input type="checkbox"/> Completion of Development & Test Environments <input type="checkbox"/> Technical/Technology Resource Staffing Model <input type="checkbox"/> Detailed Technical Solution Specifications <input type="checkbox"/> Solution Construct(s) to Specifications <input type="checkbox"/> Solution Construct Test Reports <input type="checkbox"/> Technical Configuration Management Plan 	<ul style="list-style-type: none"> <input type="checkbox"/> Web-Enabled Collection & Management of User Deployment Data <input type="checkbox"/> Spreadsheet Data Analysis & Reporting <input type="checkbox"/> Ongoing Technical Quality Reviews <input type="checkbox"/> Integration of Project Management/Process Delivery components 	<ul style="list-style-type: none"> <input type="checkbox"/> Pilot Deployment Plan <input type="checkbox"/> Deployment Management Plan <input type="checkbox"/> Impact and Capacity Management Plan <input type="checkbox"/> User Documentation <input type="checkbox"/> Technical Support Documentation <input type="checkbox"/> Pilot & General Logistics (Scorecard) Reports <input type="checkbox"/> Technology Transition Plan

4 Process Delivery Stages

The common 'staged' delivery process provides a simple method for scheduling and managing work activities and efforts across diverse project disciplines and functions. It allows for the easy integration and systematic delivery of work products and client deliverables. All Management Functions participate in each Delivery Stage.

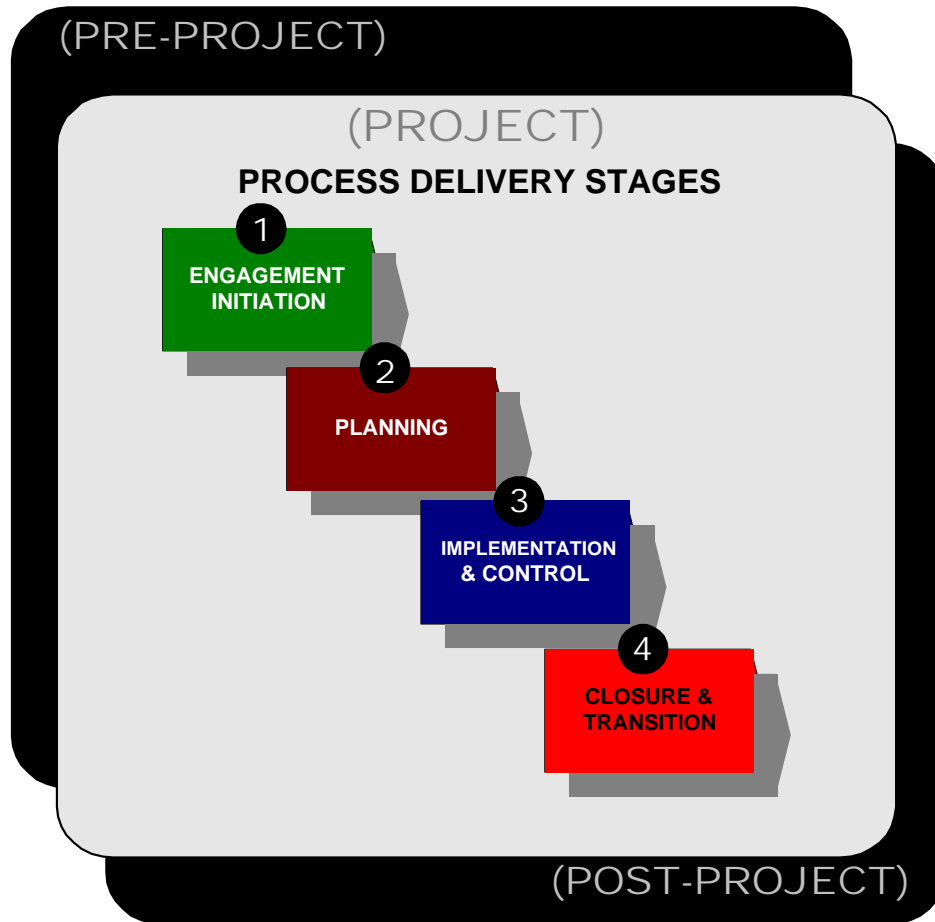


Figure 5: Process Delivery Stages

4.1 Stage-1: Engagement Initiation

Engagement Initiation is the stage in which Management Functions engage in pre-planning activity to evaluate and understand foundational information, and determine planning requirements.

Project Management Function

This function establishes Business Requirements and Initiates the project by clarifying business needs for an information system or technology application project, and determining an initial approach to providing an appropriate solution. It assesses the strategic and tactical impact(s) related to implementation, and establishes initial parametric constraints, assumptions and authorization to proceed to the next (planning) stage. Finally, it establishes and validates a “*current-state*” diagram and position statement to be used as a comparative evaluation metric for project planning.

Solutions Development Function

This function assesses the Business Requirements and determines source options and sources for developing a technical solution approach. It assesses initial constraints and assumptions as they relate to the client’s existing infrastructure, capacity and operations, and estimates planning requirements for developing an IS/IT solution.

Deployment Management Function

This function plays a consultative role in the Engagement Initiation Stage, and identifies existing quality standards, organizational policies and procedures, and applicable government regulations. A quality management resource is identified and acquired, as are resource requirements for pilot testing and deployment.

4.2 Stage-2: Planning

Management Plans are prepared and validated during this stage for all integrative management processes¹¹. The project framework and structures are defined in this stage, and a model or prototype of the conceptual solution is developed.

Project Management Function

This function determines the Project’s Scope, Implementation Plan and System of Controls by identifying all required components needed for planning, executing and controlling the project from start to finish. It defines and validates performance requirements and criteria needed to satisfy business requirements.

¹¹ Project Scope, Quality, Risk& Issues, Procurement, Knowledge/Communications. Integration, Cost, Activity, Human Resource Management Processes

Solutions Development Function

This function focuses on discovery and design, and prototyping or modeling a solution. It establishes technical specifications, standards and technical controls, and determines a strategy for product design, development, and deployment. Required resources are specified for constructing and deploying a technical solution, and the initial Solutions Development Plan is completed.

Deployment Management Function

This function identifies and verifies the requirements for user training, user documentation, and deployment logistics. A communications plan and deployment strategy are prepared, and deployment resources and requirements are identified.

4.3 Stage-3: Implementation

During this stage, the product solution is constructed and delivered, based on specifications validated by the Client/Sponsor and other stakeholders. Baselines have been made for all project management plans and project information systems and policies are being utilized and refined.

Project Management Function

The Project Management Function executes the project management plans, and implements monitoring and reporting mechanisms and activities. It acquires and assigns required project resources

Solutions Development Function

This function implements monitoring and reporting mechanisms, and administers the Solutions Development Plan. Technical project resources are acquired and placed (or assigned), and technical process standards and controls are communicated to all project team members & key stakeholders.

Deployment Management Function

This function implements Deployment Plans; resources are acquired, assigned (or placed) and delivery of the product solution is affected.

4.4 Stage-4: Closure & Transition

Client delivery of all work products and project documentation is affected in this stage. Post implementation reviews are conducted and performance reporting is prepared.

Project Management Function

This function ensures the satisfactory delivery and acceptance of all required work products to the Client/Sponsor and major stakeholders. It performs a final review and analysis of all open contracts, agreements, issues and disposition of resources, for administrative closure. It verifies that all documentation and project records are in order and transferred to appropriate client management. It performs post-implementation review and report of project performance, lessons learned, and recommendations for supplemental or related projects.

Solutions Development Function

This function positions the Solutions Development Team to work jointly with the Deployment Management Team, ensuring the satisfactory delivery and acceptance of all required work products to the Client/Sponsor and major stakeholders. It performs a final technical and quality review and analysis of all completed work products, and transfers any remaining technical equipment and/or documentation to appropriate client management. Finally, it performs a post-implementation technical review of the project and its (technical) deliverables.

Deployment Management Function

This function positions the Deployment Management Team to work jointly with the Solutions Development Team, ensuring the satisfactory delivery and acceptance of all required work products to the Client/Sponsor and major stakeholders. It surveys user communities for feedback, and determines user satisfaction levels. Finally, it performs a post-implementation logistical review of the project deployment and its deliverables.

